

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1        1-29. (Canceled)

1            30. (New) A formatting template for printing XML files, comprising a data map,  
2        wherein the data map comprises at least one XML Descriptor (XMD) defining formatting for  
3        an XML data element, the XMDs being associated with a qualified tag formed by a  
4        concatenation of XML start tags parsed from an XML document, the XMD and qualified  
5        tags being configured to provide a format for XML data for merging in a single step with  
6        XML data to produce a data stream for printing.

1            31. (New) The formatting template of claim 30, wherein the qualified tag  
2        identifies a formatting instruction that is used to format the content for an XML: data element.

1            32. (New) The formatting template of claim 30, wherein the qualified tag is  
2        generated whenever a start tag is encountered when parsing a XML document.

1            33. (New) The formatting template of claim 30, wherein the data map comprises  
2        a chain of XML descriptors for formatting attributes if XML elements, wherein the attributes  
3        are broken into fields.

1            34. (New) The formatting template of claim 30, wherein an XML descriptor that  
2        does not have a matching qualified tag is skipped and a next XML descriptor matching a start  
3        tag is used in formatting the XML data.

1        35. (New) A printing system, comprising:  
2              a spooler for receiving printable information from the print channel;  
3              a print services facility for parsing an XML file; and  
4              a printer for printing the print steam according to the formatting defined by the  
5        formatting template;  
6              wherein the formatting template defines a data map comprising at least one  
7        XML Descriptor (XMD) defining formatting for an XML data element, the XMDs being  
8        associated with a qualified tag formed by a concatenation of XML start tags parsed from an  
9        XML document, the XMD and qualified tags being configured to provide a format for XML  
10        data for merging in a single step with XML data to produce a data stream for printing.

1        36. (New) The printing system of claim 35, wherein the qualified tag identifies a  
2        formatting instruction that is used to format the content for an XML: data element.

1        37. (New) The formatting template of claim 35, wherein the parser generates a  
2        qualified tag whenever a start tag is encountered when parsing a XML document.

1        38. (New) The formatting template of claim 35, wherein the data map comprises  
2        a chain of XML descriptors for formatting attributes if XML elements, wherein the attributes  
3        are broken into fields.

1        39. (New) The formatting template of claim 35, wherein the parser skips an XML  
2        descriptor that does not have a matching qualified tag and uses a next XML descriptor having  
3        a matching start tag to format the XML data.

1        40. (New) The formatting template of claim 35 further comprising a buffer for  
2        storing start tags in order as the XML file is parsed, wherein the parser removes the previous  
3        start tag identified as matching a qualified tag when an end tag is found.

1        41. (New) A method for printing XML files directly using a formatting template,  
2        comprising:

3              placing an XML file to be printed on a server spool;  
4              parsing the XML file until a start tag associated with an XML element is encountered;  
5              generating a qualified tag in response to encountering the start tag;  
6              searching a data map comprising XML descriptors until an XML descriptor  
7        associated with a qualified tag matching the generated qualified tag is identified;  
8              merging in a single step the XML element associated with the encountered start tag  
9        with the XML descriptor associated with a qualified tag matching the generated qualified tag  
10      to produce a formatted print data stream; and  
11              printing a document using the produced formatted print data stream.

1        42. (New) The method of claim 41, further comprising determining whether the  
2        end of the document has been reached.

1        43. (New) The method of claim 41, further comprising continuing to process  
2        parsed XML element until the end of the document is reached.

1        44. (New) The method of claim 41 further comprising identifying a formatting  
2 instruction that is used to format the content for an XML data element according to an XML  
3 descriptor having a qualified tag matching the generated qualified tag is identified.

1        45. (New) The method of claim 41 further comprises generating the qualified tag  
2 whenever a start tag is encountered when parsing a XML document.

1        46. (New) The method of claim 41 further comprising skipping an XML  
2 descriptor that does not have a matching qualified tag and using a next XML descriptor  
3 matching a start tag to format the XML data.

1        47. (New) An article of manufacture comprising a program storage medium  
2 readable by a computer, the medium tangibly embodying one or more programs of  
3 instructions executable by the computer to perform a method for printing XML files directly  
4 using a formatting template, the method comprising:

5              placing an XML file to be printed on a server spool;  
6              parsing the XML file until a start tag associated with an XML element is encountered;  
7              generating a qualified tag in response to encountering the start tag;  
8              searching a data map comprising XML descriptors until an XML descriptor  
9 associated with a qualified tag matching the generated qualified tag is identified;  
10             merging in a single step the XML element associated with the encountered start tag  
11 with the XML descriptor associated with a qualified tag matching the generated qualified tag  
12 to produce a formatted print data stream; and  
13 printing a document using the produced formatted print data stream.

1        48. (New) The method of claim 41, further comprising determining whether the  
2 end of the document has been reached.

1        49. (New) The method of claim 41, further comprising continuing to process  
2 parsed XML element until the end of the document is reached.

1        50. (New) The method of claim 41 further comprising identifying a formatting  
2 instruction that is used to format the content for an XML data element according to an XML  
3 descriptor having a qualified tag matching the generated qualified tag is identified.

1        51. (New) The method of claim 41 further comprises generating the qualified tag  
2 whenever a start tag is encountered when parsing a XML document.

1        52. (New) The method of claim 41 further comprising skipping an XML  
2 descriptor that does not have a matching qualified tag and using a next XML descriptor  
3 matching a start tag to format the XML data.